

Appl. Serial No. 10/628,163
Amendment Dated 2 March 2005
Reply to Office Action of 10 September 2005

63479.0118

Remarks/Arguments

This Amendment is in response to the Office Action mailed 10 September 2005 (10.09.2005). In this Office Action, the Examiner rejected claims 6 and 9-14 under 35 USC 112, 2nd paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. Additionally, the Examiner rejected claims 6 and 9-14 under 35 USC 101 as being directed to non-statutory subject matter. Additionally, the Examiner rejected claims 1-9 and 11-18 under 35 USC 103(a) as being unpatentable over Lambrecht et al. (US Pat. No. 5,935,232) in view of Elabd (US Pat. No. 6,526,462) and Geiger et al (US Pat. No. 4,672,587). Further, the Examiner rejected claim 10 under 35 USC 103(a) as being unpatentable over Lambrecht et al. (US Pat. No. 5,935,232) in view of Elabd (US Pat. No. 6,526,462) and Geiger et al (US Pat. No. 4,672,587) and further in view of Qureshi et al (US Pat. No. 6,353,867).

1. Rejections to Claim 6

The Examiner rejected claim 6 under 35 USC 112, 2nd Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. Additionally, the Examiner rejected claim 6 under 35 USC 101 as being directed to non-statutory subject matter. Applicant has canceled this claim, corrected the problems, merged the text into Claim 5. Therefore, Applicant respectfully requests that the Examiner withdraw the rejections to claim 6 under 35 USC 112, 2nd Paragraph and 35 USC 101.

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2. Rejections to Claims 9-14

The Examiner rejected claims 9-14 under 35 USC 112, 2nd Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. Additionally, the Examiner rejected claim 9-14 under 35 USC 101 as being directed to non-statutory subject matter.

The Examiner incorrectly analyzed claims 9-14 to conclude that the claims are indefinite under 35 USC 112, 2nd Paragraph and directed to non-statutory subject matter under 35 USC 101. The analysis of Claims 9 and 11-14 begins with the understanding they these claims are multiple dependent claims as provided for by MPEP 608.01(n) and 37 CFR 1.75(c), and where Claim 10 is a dependent claim on claim 9.

MPEP 608.01(n) and 37 CFR 1.75(c) provides the following with regard to structure and analysis of dependent claims and multiple dependent claims:

(c) One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim ("multiple dependent claim") shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. ... Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

MPEP 608.01(n) summarizes the above by stating: "generally, a multiple dependent claim is a dependent claim which refers back in the alternative to more than one preceding independent or dependent claim."

Referring back to Claims 9 and 11-14 in light of the above, the Examiner will see that the claims are all in a format of "a dependent claim according to claim a, b, c, or d, ...". This format is allowable under the above as each of these claims refers to more than one other claim in the alternative only. Dependent claim 10 is in an allowable

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format because the claim that it references (claim 9) does not serve as a basis for any other multiple dependent claim.

MPEP 608.01(n) and 37 CFR 1.75(c) additionally instructs the Examiner on the proper examination of dependent and multiple dependent claims. The analysis of dependent claims is that claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. The analysis of multiple dependent claims is that a multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered. With these instructions on the analysis of claims, the analysis of claim 9 (as an exemplary claim of the group) as follows:

Claim 9: A dependent claim according to claim 1, 2, 3, 4, 5, 6, 7, or 8 ...

9/1	(an apparatus claim)
9/2/1	(an apparatus claim)
9/3	(a system claim)
9/4/3	(a system claim)
9/5	(a method to make claim)
9/6/5	(a method to make claim)
9/7	(a method to use claim)
9/8/7	(a method to use claim)

Since a dependent claim includes all of the limitations of the prior claim and since a multiple dependent claim incorporates all of the limitations of the claims in relation to that which it is being considered, dependent claim 9 will be directed to a single statutory claim during its analysis. Using the above as an example, claims 9/1 and 9/2/1 are directed to an apparatus claim, claims 9/3 and 9/4/3 are directed to a system claim, claims 9/5 and 9/6/5 are directed to a method to manufacture claim, and claims 9/7 and

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9/8/7 are directed to a method to use claim. Thus, claim 9 is directed to a single statutory subject matter during its analysis.

Although not binding on the Examiner, counsel for the Applicant has used this format of multiple dependent claims in the following US patents: 6,745,357; 6,732,346; 6,728,654; 6,714,045; 6,512,333; 6,460,134; 6,457,170; 6,445,213; 6,434,853; 6,370,632; 6,347,327; 6,301,600.

Applicant therefore respectfully requests that the Examiner withdraw the rejections to claims 9-14 under 35 USC 112, 2nd Paragraph and 35 USC 101.

3. Claim Rejections under 35 USC 103(a)

The Examiner rejected claims 1-9 and 11-18 under 35 USC 103(a) as being unpatentable over Lambrecht et al. (US Pat. No. 5,935,232) in view of Elabd (US Pat. No. 6,526,462) and Geiger et al (US Pat. No. 4,672,587). Additionally, the Examiner rejected claim 10 under 35 USC 103(a) as being unpatentable over Lambrecht et al. (US Pat. No. 5,935,232) in view of Elabd (US Pat. No. 6,526,462) and Geiger et al (US Pat. No. 4,672,587) and further in view of Qureshi et al (US Pat. No. 6,353,867). In response to the Office Action, Applicant is amending the claims to further clarify the claimed invention. Applicant believes that a new search is unnecessary as these amendments narrow the scope of the claimed invention. Further, Applicant believes that these amendments places the pending claims in immediate condition for allowance or appeal.

The Examiner has failed to establish a prima facie case of obviousness for using the combination of Lambrecht, Elabd, and Geiger as 103(a) references for claims 1-9

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and 11-18. Additionally, the Examiner has failed to establish a prima facie case of obviousness for using the combination of Lambrecht, Elabd, Geiger, and Qureshi as 103(a) references for claim 10.

To establish a prima facie case of obviousness, an Examiner must met 3 basic criteria:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP 2143.

When an Examiner is applying 35 USC 103, the Examiner must consider and follow the following standards:

When applying 35 USC 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

MPEP 2141

The claimed invention is a system on chip (SoC) that has 2 internal point to point unidirectional buses where each bus serves a specific function by their control and operation of the various components attached to the bus. The first internal point to point unidirectional bus uses one or more channel controllers to couple to one or more processor subsystems and one or more DMA-type peripheral(s). A Memory Access Controller uses the first internal bus to control transactions on the bus between the previously listed components. The first internal bus allows for high speed accesses to

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shared memory between the processor subsystems and the DMA-type peripherals. This bus is optimally used for peripheral to memory and memory to peripheral communications and can facilitate peer to peer communications. The second internal point to point unidirectional bus couples the processor subsystems through an interface controller to one or more non-DMA peripherals, the Memory Access Controller, and the other DMA type peripherals, and controls the transaction between these components. The second internal bus provides for low speed accesses to peripherals. This bus is the communication interface between the processor subsystems and the peripherals, and is not used to access memory.

Lambrech describes a system for choosing communication pathways for data transfers on a computer chip based on desired latency and bandwidth characteristics. Lambrecht does not provide any limitations on components attached to either of its buses. Nor does Lambrecht limit the communication on its buses, for example, the buses in Lambrecht can support unidirectional communications or bi-directional communications. The present invention, however, does limit the type of peripherals to each bus. Additionally, the present invention also limits the communication on the bus to point to point unidirectional signals. Lambrecht does not expressly state that there is a need for these limitations, nor does it imply a need for these limitations. Therefore, this reference fails as a 103(a) reference because there is no motivation in the reference to combine it with other references to include the limitations of the claimed invention.

Elabd is a programmable multi-tasking memory management system that manages memory requests associated with a SoC device. This device contains a bus that is similar in structure to Applicant's second internal bus. Elabd does not, however,

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contain a structure similar to Applicant's first internal bus. Elabd contains multiple dedicated buses between each of processor structures or communication devices. The Applicant, on the other hand, uses a single shared bus for this type of communication. Elabd does not expressly state that there is a need for these limitations, nor does it imply a need for these limitations. Thus, this reference fails as a 103(a) reference because there is no motivation in the reference to combine it with other references to include the limitations of the claimed invention.

Qureshi describes a system of virtual components for a SoC design. Qureshi does include all of the limitations of the claimed invention. Qureshi does not expressly state that there is a need for these limitations, nor does it imply a need for these limitations. Thus, this reference fails as a 103(a) reference because there is no motivation in the reference to combine it with other references to include the limitations of the claimed invention.

Finally, Geiger describes a general decoder structure. Geiger does not have any applicability to SoC devices. Thus, this reference fails as a 103(a) reference because there is no motivation in the reference to combine it with other references to include the limitations of the claimed invention.

In summary, the Examiner failed to establish a prima facie case of obviousness with the combination of Lambrecht, Elabd, and Geiger as 103(a) references for claims 1-9 and 11-18 and with the combination of Lambrecht, Elabd, Geiger, and Qureshi as 103(a) references for claim 10. The combination of Lambrecht, Elabd, and Geiger and the combination of Lambrecht, Elabd, Geiger, and Qureshi both fail to teach or suggest all of the claim limitations of the currently claimed invention. Additionally, both

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combinations fail to provide a suggestion or motivation to one skilled in the art of designing systems on chips to modify any of the cited references for use with the claimed invention. Therefore, Applicant respectfully requests that the Examiner withdraw the rejections to claims 1-9 and 11-18 under 35 USC 103(a) as being unpatentable over Lambrecht et al. (US Pat. No. 5,935,232) in view of Elabd (US Pat. No. 6,526,462) and Geiger et al (US Pat. No. 4,672,587). Additionally, the Applicant respectfully requests that the Examiner withdraw the rejection to claim 10 under 35 USC 103(a) as being unpatentable over Lambrecht et al. (US Pat. No. 5,935,232) in view of Elabd (US Pat. No. 6,526,462) and Geiger et al (US Pat. No. 4,672,587) and further in view of Qureshi et al (US Pat. No. 6,353,867).

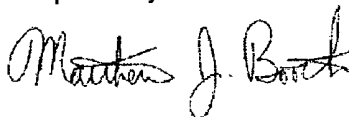
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4. Summary

In view of the above, Applicant believes that each of the presently pending claims is in immediate condition for allowance or appeal. Accordingly, Applicant respectfully requests that the Examiner withdraw the outstanding objections and rejections of the claims and issue a timely Notice of Allowance in this case.

Respectfully submitted,



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